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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/709,349	09/06/96	HANSMA	P 1279-225XX

25M1/1110

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EXAMINER

LEE, J

ART UNIT

PAPER NUMBER

2509

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DATE MAILED: 11/10/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☒ Responsive to communication(s) filed on 9-6-96 (new application)

☐ This action is FINAL.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-23 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☒ Claim(s) 22-23 is/are allowed.

☒ Claim(s) 1-2 and 5-21 is/are rejected.

☒ Claim(s) 3 and 4 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of Reference Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449. Paper No(s) 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

- SEE OFFICE ACTION ON THE FOLLOWING PAGES -

PTOL-326 (Rev. 10/95)

* U.S. GPO: 1996-409-290/400Z

ATTACHMENT TO PAPER NO. 5
PTO Copy

REVIEWER llh

DATE 11/14/97

Art Unit: 2509

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5 and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mamin et al.

Mamin et al. disclose means for forming a focused beam spot on a cantilever having a size of 8 μm or less (specifically less than 5 μm); see column 5, lines 49-53).

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section

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102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 2, 6-13 and 15-21 are rejected under 35 U.S.C. § 103 as being unpatentable over Mamin et al.

Mamin et al. disclose focusing light onto a cantilever with a 5 μm or less diameter. Mamin et al. fail to disclose all of the features of the above claims. However, these features (small, less than 30 μm , cantilever; polarizing beam splitters; tapping mode; removable modules; etc.) are well known in the

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scanning microscopy arts and would have been obvious in the practice of the invention of Mamin et al., who disclose an improved cantilever position sensor for such prior art scanning microscopes.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Amer et al. disclose a cantilever with dimensions less than or equal to 30 μm (column 4, lines 50 et seq.). Park et al. disclose a lens (and other optics) for viewing the cantilever. Kato et al. (cited by applicant) disclose $1/4 \lambda$ plates and polarized beam splitters.

Claims 3-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 22-23 are allowable over the prior art of record, and claims 3 and 4 would be allowable, because the prior art fails to disclose the means for adjusting the size and shape of the incident beam spot.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John R.

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Lee whose telephone number is (703) 308-4116. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Westin, can be reached on (703) 308-4823. The fax phone number for this Group is (703) 308-7726.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Edward Westin

EDWARD P. WESTIN
SUPERVISORY PATENT EXAMINER
GROUP 250


Lee/tj
Nov. 3, 1997